

## The Role of Shaping the Client's Interpretations in Functional Analytic Psychotherapy

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Clinical behavior analysis often targets the shaping of clients' functional interpretations of/ or rules about his own behavior. These are referred to as clinically relevant behavior 3 (CRB3) in functional analytic psychotherapy (FAP). We suggest that CRB3s should be seen as contingency-specifying stimuli (CSS), due to their ability to change the function of stimuli—including descriptions of variables involved in the client's behavioral problems as well as descriptions of variables associated with improvement or therapeutic change. This paper discusses the role of rule-governed behavior in FAP and the processes of shaping client interpretations of his or her behavior, and proposes that this may be an overlooked and important mechanism of change in FAP. To shape CRB3 in FAP, the therapist describes CSSs related to the therapy relationship that are consistent with the client's social environment, and reinforces improvements of the client's following his or her own newly shaped CSS descriptions during the session.

*Key words:* functional analytic psychotherapy, rule-governed behavior, contingency-specifying stimuli, shaping

There are several empirically-based interventions informed by clinical behavior analysis (Dougher, 1993, 1994, 2000). Among the most prominent interventions, Kohlenberg and Tsai's (1991) functional analytic psychotherapy (FAP; Kohlenberg, Tsai, & Kanter, 2009) is noteworthy. FAP utilizes the therapeutic relationship as a means of modifying the client's interpersonal problem behaviors. FAP's central view is that the client interacts with the therapist similarly to the way in which he interacts with other significant people in his life (Kohlenberg & Tsai, 1991; Kohlenberg et al., 2009). Hence, behavioral changes that take place and are reinforced in session would have an increased probability of generalizing to other social situations.

FAP emphasizes three response classes of interest for the treatment of clients with relationship difficulties (Kohlenberg & Tsai, 1991). The first type, clinically relevant behavior 1, or CRB1, involves in-session client problems (e.g., the client does not defend his or her own point of view after the therapist makes an evoking remark); the second, clinically relevant behavior 2, or CRB2, involves in-session client improvements (e.g., the client acts assertively in response to evoking remarks made by the therapist); and the third, clinically relevant behavior 3, or CRB3, involves client functional interpretations of the behavior (e.g., the client functionally describes his or her passive responses after evoking remarks by authority figures). Although CRB3 responses are provided by the client, it is often the therapist who specifies some of the functional relations with the intent to assist the client in learning a verbal interpretative repertoire (Hayes, Kohlenberg, & Melancon, 1989).

Kohlenberg and Tsai (1991) argue that the active component of FAP is the therapist reinforcing or punishing the client's behaviors in the exact moment when these behaviors appear in session; that is, in-vivo contingencies. Consistent with this hypothesis, studies have reliably shown that there are problems associated with delayed reinforcement and

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punishment of target behaviors (e.g., Lerman & Vorndran, 2002; Saltzman, 1951). The authors suggest that punishment should be contingent on the behavior and only used when other techniques are shown to be ineffective; for example, when the therapist tries to block the client's avoidance response (Kohlenberg & Tsai, 1991). In fact, the success of applied behavior analysis in the treatment of children with atypical development is a direct result of in-vivo application of reinforcement in semicontrolled environments (Kanter, Callaghan, Landes, Bush, & Brown, 2004). Interpersonal responses of the client are shaped in session, and different dimensions of the response, including topography, magnitude, and force, may be differentially reinforced (Catania, 2003). Thus, some response dimensions are differentially reinforced, such as voice intonation, eye contact, and the timing of response within the verbal episode. Differential reinforcement may also occur with respect to the content of what is said, as when the therapist differentially reinforces a verbalization that is proximal to a complaint about the therapist's lack of punctuality (e.g., the client asks for the time). The behaviors targeted for shaping will range on a continuum between CRB1s and CRB2s.

CRB3s are the client's functional interpretations of in-session CRB1s, CRB2s, and related daily life behaviors. The shaping of CRB3s can be seen as an intermediary phase in FAP to increase the frequency of CRB2s (Kohlenberg et al., 2009). The FAP therapist's goal is that the client's verbalized interpretations are based on an awareness of the relevant reinforcement history and controlling variables. When the client accurately tacts his or her behavior in relation to reinforcing, discriminative, and eliciting stimuli, he produces more effective rules, which should lead to an increase in contact with the controlling variables in the relevant situations or interactions. The formulation of more effective rules allows the individual to take practical actions around his behavioral problems. This may facilitate the learning of new, more effective alternative behaviors or CRB2s.

According to Kohlenberg and Tsai (1991), CRB3 facilitates client generalization of new interpersonal behaviors shaped in therapy to relationships outside of session (e.g., marital life, friendships, or work relationships). The

authors state that when the two different interpersonal contexts (therapy and daily life) are functionally equivalent environments that evoke the same behaviors from the client, generalization might occur due to the functional, and not the physical, similarities among the social environments. This would increase the density of positive and negative reinforcement coming through daily life interpersonal exchanges, resulting in the experience of more genuine relationships in the client's life (Kohlenberg & Tsai, 1991).

Kohlenberg and Tsai (1991) recommend five rules that the clinician should follow to conduct FAP. Rule five in particular involves the manipulation of CRB3. This rule states that the therapist must provide functionally informed interpretations and implement other generalization strategies (Tsai, Kohlenberg, Kanter, & Waltz, 2009). In FAP, the best functional descriptions of CRB3 involve specification of contingencies that occur both in session and in daily life. A therapist could say, for instance, "You are saying that you have been feeling insecure when telling me about your obsessions, like you do when you tell your mother about them." Such verbal functional equivalences demonstrate the FAP therapist's emphasis on the generalization of in-session therapeutic gains to daily life. As in all behavioral treatment, the ultimate goal in FAP is client behavioral change in the natural environment.

Recently, Kohlenberg et al. (2009) argued that the main technique of FAP is the shaping of CRB2s. CRB3s are viewed as secondary and relevant only in facilitating the evoking, shaping and generalizing of CRB2s. However, the exact influence of CRB3s on the client's behavioral change, inside and outside of session, has not been fully articulated.

In contrast to Kohlenberg et al. (2009), our hypothesis is that CRB3 responses are as central to client behavioral change as is direct shaping of interpersonal behaviors. In the service of this hypothesis, this paper discusses (a) the processes and contingencies that may be involved in the formulation of CRB3s, and (b) the processes involved in the generalization of CRB2s, through CRB3s, to daily life situations. In addition, we discuss the unique characteristics of FAP with respect to the shaping of rule following, including (c) the possibility of shaping rules

consistent with contingencies occurring in session, and (d) in-session natural reinforcement of rule following.

*Processes and Contingencies Involved in the Formulation of Rules in FAP*

When the client acts according to an instruction given by the therapist, he may have his behavior naturally reinforced. Often, however, this may not occur (Kohlenberg & Tsai, 1991). Skinner (1953/1968), in discussing the process of psychotherapy, stated that directly instructing a client to engage in a behavior, or describing a rule of conduct, may not be of any help to the client. Even though the therapist may have formulated effective rules in the past, a new rule may not control the client's behavior. Skinner states:

When the patient himself sees what is wrong, it is not the fact that the solution has come from within him which is important but that, in order to discover his own solution, his behavior with respect to his problem must have been greatly altered. (p382)

According to Skinner, effective psychotherapy should change a substantial part of the client's repertoire such that the client becomes capable of discovering the solution to his own problems. FAP may produce such change. In the therapeutic session, a client who displays various behaviors before finding a "verbal solution" for distress may come to behave in a manner that produces better behaviors (Skinner, 1953/1968). From this perspective, the shaping of interpretations related to the relevant contingencies may generate effective rules of conduct.

When a therapist poses a question in session to investigate a target behavior, he stimulates the client to specify the variables involved in the control of his or her behavior. These interpretations might involve, for example, descriptions of causal relations between events, for example, if-then relations pertinent to the client's or others' behaviors. These types of relations may also involve relating recurrent actions (of the client and/or of others) with other events or actions (Zamignani & Meyer, 2011).

According to Catania (2003), shaping verbal behavior through differential reinforcement

involves the treatment of successive verbal responses that vary along semantic and other verbal dimensions. In the case of rule formulation, the therapist is mostly interested in the client's specifications of relevant contingencies. The distribution of verbal interpretations varies, with some responses closer to and some farther from the final target verbal formulation. The criteria that guide differential reinforcement of the client's successive approximations (these being verbal emissions) are the description of rules that are closer to the targeted formulation of the therapist.

FAP therapists are interested in shaping functional interpretations. Effective shaping would evolve from shaping formulations of rules that specify variables involved in the client's behavior problems (or CRB1s) to rules related to improved behaviors and therapeutic change (or CRB2s). The latter would include instructions about how the client could behave to produce better consequences than those previously produced in his or her life. Improved behaviors frequently include responses that are incompatible with problem responses. Accordingly, Catania, Mathews, and Shimoff (1982) show that under certain circumstances, the shaping of a verbal rule may produce consistent rule following even when the nonverbal behaviors of the subject are under the control of concurrent contingencies. As a final objective of therapy, the verbal behavior of the client in session should control the emission of more adequate behaviors outside of therapy. Therefore, in theory, these new rule-governed behaviors would be followed by clients in session with the therapist as well as outside of therapy, where the client's problems originated (Salzinger, 1998). As a product of the therapeutic process, a functional relation is expected between the client's verbal behavior shaped in session and the client's behavior outside of session.

*Contribution of CRB3s to the Promotion of Functional Equivalence*

A therapeutic focus on CRB3s is especially indicated in cases where the client verbalizes that a CRB1 occurs under the control of a self-rule. When this rule occurs covertly and influences the subsequent problem behavior, as in the A-B-C model (in

which “A” represents the environmental antecedent, “B” the self-rule, and “C” the emotional or behavioral consequence), the treatment of choice may focus on changing “B” (Kohlenberg & Tsai, 1991). In FAP, the therapist investigates which variables in the therapeutic relationship control the client’s verbal responses while looking for opportunities to punish or differentially reinforce new interpretations that lead to more adequate social contingencies (Salzinger, 1998). The new interpretations, or shaped CRB3s, represent “B” in the chain, increasing the client’s contact with controlling variables. Therefore, under the control of new CRB3s, the client is able to emit the improved behaviors, or CRB2s.

During CRB3 shaping, the differential reinforcement of CRB3s tends to promote the development of verbal functional equivalence between variables involved in the therapeutic relationship and those involved in the client’s interpersonal life. In other words, the therapeutic relation shapes the client to specify the functional similarities between his behaviors in session and in daily life (Kohlenberg & Tsai, 1991). This increases the likelihood of generalization of CRB2s to daily life problem situations.

However, the concept of a rule as having only discriminative functions does not adequately explain how generalization of in-session CRB2s to interpersonal relationships outside of session occurs. It would be unreasonable, for example, to assume that self-rules always occur when a client’s improved behavior is observed.

CRB3s may be better understood as Contingency-Specifying Stimuli or CSS (Blakely & Schlinger, 1987; Schlinger, 1990, 1993, Skinner 1957/1992), since a shaped CRB3 seems to be effective when it alters the functions of stimuli as specified by a rule. This allows the client to behave according to the rule even when temporally distant from the formulation that was shaped in session.

It is important to point out that if a discriminative stimulus is presented in combination with the CSS, the evocative effect might be attributed to the concomitant presentation. For example, if the therapist shaped a CRB3 that describes the potential benefits of assertiveness of the client in relation to certain behaviors of the therapist,

and the client then starts to challenge some of the therapist’s actions (CRB2), the CRB3 would alter the functions of stimuli present in the immediate environment. The evocative effect of the therapist as a stimulus would then be observed. Possibly, the therapist’s responses to the client’s CRB2 would have a larger reinforcing value due to the function altering effects of the CRB3.

The FAP therapeutic relationship facilitates the specification of functional relations in two ways: (1) through the possibility of shaping of CSS consistent with the current contingencies and, (2) through the unique possibility of natural reinforcement in session of behaviors governed by already shaped CSS. This last factor creates a unique correspondence history between the stimuli specified in the rule and social events. Each of these points will be explored further in the next two sections.

#### *Shaping of CSS Consistent With the Current Contingencies*

In cognitive or cognitive-behavior therapies shaping occurs through the therapist’s verbal behaviors, such as communications to the client that a given cognition is not equivalent to reality. The theoretical basis of cognitive therapy is focused on the idea that the individual’s negative feelings and behaviors are determined by the way he perceives the world through his own cognitions (Beck, Rush, Shaw, & Emery, 1979). Thus, the objective of the therapist is to produce cognitive change or to modify “dysfunctional thoughts”—(those not consistent with reality) with the intent of promoting a long-lasting emotional and behavioral change. According to Beck (1995), emotions will usually change when “dysfunctional thoughts” are subjected to rational reflection. Catania (2003) discussed the nature of cognitive change in cognitive-behavioral therapies:

Therapies that invoke cognitive behavior modification or cognitive efficacy are said to modify the client’s behavior by changing the client’s cognitions, but this is ordinarily done by changing the client’s verbal behavior through instructions or verbal shaping (though verbal shaping is more likely to be incidental than deliberate). (p. 312)

Despite the emphasis on challenging thoughts by cognitive clinical methods (e.g., Socratic questioning), therapists may also shape the client's functional interpretations with respect to their problems. This is particularly true in verbal therapies that focus broadly on the analysis of events (including contingencies) outside the session such as cognitive behavior therapy.

Nevertheless, in therapies that focus on the analysis of outside events, it is difficult for the therapist to differentially reinforce the client's functional interpretations in session. In this format, the therapist and client functionally analyze the factors contributing to the problems that occur outside of therapy. This method uses evidence from verbal report, homework tasks focusing on behavioral change, and training of specific abilities.

However, in this modality, as precise as the specification of functional relations among events may be, the therapist may nevertheless miss valuable information about controlling variables because they are seldom directly observed. As a result, the process of differential reinforcement may be greatly impaired. The therapist may not know exactly what to reinforce since he or she lacks direct access to the events and must rely on the client's potentially distorted descriptions of antecedent events, behaviors, and consequences. This situation is similar to the laboratory task of a shaping procedure in which the reinforcing stimulus is presented by an inexperienced experimenter at the wrong time (e.g., while training a rat to press a lever; the reinforcer is presented when the rat moves away from the lever).

In FAP, the focus on interactional behavior that occurs in-vivo provides a wealth of detail that allows the client to more accurately tact the relevant variables related to his behaviors (Hayes et al., 1989a). This results in improved shaping of CSS with contingency descriptions consistent with the relevant variables in the social environment. Consider the hypothetical dialogue between a client and a therapist:

*Client:* "I noticed that always when we touch on difficult topics for me, such as my marriage, I end up missing the following session, or arriving late for it. I feel enraged."

*Therapist:* "I also noted that and, in a way, your absences make me feel more distant

from you, as if my opinion would be irrelevant. However, it seems that you might be eliciting this feeling in others as well."

*Client:* "When my wife tries to discuss our relationship, I end up abruptly interrupting her attempts and I leave the house right away. She is already tired of this."

Out of this exchange with the therapist, the client will develop a rule, such as: "I have to try harder to communicate with my wife instead of abruptly interrupting her, and leaving the house—if I do not communicate with my wife, she will leave me." If after this episode the client starts a dialogue with his partner, the type of rule-governed behavior that would result would be classified as tracking: rule-governed behavior based on the apparent correspondence between the rule and environmental events (Hayes, Zettle, & Rosenfarb, 1989). FAP's format allows the therapist to precisely reinforce rule-formulations based on point-by-point interactions between the client and the therapist. This tracking feature favors functional equivalence between the contexts of therapy and daily life, since the tracking of the client depends on the apparent correspondence between events specified by CSS and the correspondence with interactional environments. Therefore, in-session natural reinforcement of rule following is relevant to FAP. Rules previously formulated and shaped as CRB3 (see discussion below) become CSS that control the emission of "tracking" CRB2s in session.

#### *In-Session Natural Reinforcement of Behaviors Governed by Already Shaped CSS*

One of the characteristics of tracking is that it is influenced by the history of the listener in contact with the natural consequences for having followed the rule, the correspondence between this and other rules or events in the listener's history, and the importance of the consequence implied in the rule (Hayes, Zettle, et al., 1989). In session, the therapist in the role of the speaker has the unique opportunity to create a reinforcement history of correspondence, even if the client has not experienced it in other close relationships. The in-session improved behavior is reinforced, and, in turn, it increases in frequency. This favors the maintenance of rule following by the client.

An issue of other psychotherapies that focus on daily life behavior, without FAP's in-session focus, is that the supposed progress, or, more precisely, the report that the client provides about the consequences produced by his new behaviors, is not amenable to in-vivo monitoring and contingent reinforcement by the therapist. Frequently, the client reports improvements when in fact the social environment did not reinforce the new behaviors (i.e., noncorrespondence between the action and the verbal report) or the client deals with the problem by avoiding or postponing the usual aversive consequences (i.e., an avoidance repertoire). In these instances, a curious outcome could be that the client may come under the control of appropriate CSS in session in the relationship with the therapist but may rarely demonstrate effective changes in other social environments.

According to Ferster (1979), one of the reasons for confusion between the client's life events and the discourse that happens in psychotherapy is that the verbal reinforcers are arbitrary in relation to the reported behaviors. Thus, psychotherapies that shape rule following in out-of-the-office formats may rely on arbitrary reinforcement provided by the therapist, that is, the therapist's approval of the client's rule following that was not observed by the therapist. On the other hand, the FAP format allows the therapist to create a precise reinforcement history for the client's tracking in session.

Another explanation for this phenomenon is the behavioral contrast; reinforcement contingencies in one setting corresponding to an inverse rate of responding in another environment (McSweeney & Weatherly, 1998). Tarbox and Hayes (2005) show that higher accuracy of description of contingencies may relate to the increase or decrease of the probability of the contrast effect to occur in human responses, depending on which contingencies, if any, are described. FAP avoids this effect by allowing the following of more flexible CSSs, through the multiple alternatives for the client to respond to the contingencies created by the therapist. Such CSSs might present varying degrees of specificity of their descriptions of the social environment, while preserving the specificity of relevant functional relations among events.

### *Final Considerations*

In this paper, we argue that CRB3 should be conceptualized as a CSS. Our argument is based on the Skinnerian conception of the rule (Skinner 1957/1992), which was further developed by Blakely and Schlinger (1987).

The article also suggests that the format of FAP provides a unique context of verbal stimulation for the therapist and client. It is hypothesized that through the therapeutic relationship, the therapist will shape the following of CSSs consistent with the social environment of the client. In addition, the therapist has the unique opportunity to reinforce in-session client improvements controlled by shaped CSS.

In sum, CRB3s, conceptualized as CSSs, might be crucial for a client's therapeutic change to generalize outside of the therapeutic environment. Empirical investigation of this possibility is required and seems to be an important direction for future research on FAP and related behavior-analytic psychotherapies.

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